DOCUMENT RESUME

ED 189 894 FL 011 727

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TITLE An Analysis of the Effects of a Bilingual Curriculum on a Selected Group of Ninth Graders with Regards to Attitude toward School and Self Concept.
PUB DATE 79
NOTE 11p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Attitude Measures: *Bilingual Education: *School Attitudes: Secondary Education: Secondary School Students: *Second Language Learning: Self Concept Measures: *Self Esteem: *Spanish Speaking: *Student Attitudes
IDENTIFIERS School Sentiment Inventory: Self Appraisal Inventory: Self Esteem Inventory

ABSTRACT

A study was made of a group of ninth grade students to investigate the effects of a bilingual curriculum on monolingual Spanish (MS) students with regard to their self concept and attitude toward school. The research used one treatment group (MS) and two comparison groups: monolingual English Students (ME) and Bilingual Students (BI). The ME and BI groups were from a mainstream curriculum. These three groups of students were administered the following instruments: Self Esteem Inventory (Coopersmith, 1967), Self Appraisal Inventory (Frith and Nakimura, 1972), and the School Sentiment Inventory (Frith and Nakirmura, 1972) both at the beginning and at the end of the semester. The change between pre- and post-test administration was assessed by using an analysis of covariance for each dependent measure. The pretest became the covariate and the respective post-test because the dependent variable. The results of the analysis of covariance produced a significant difference in the dependent measure Self Esteem Inventory: the Self Appraisal Inventory yielded a significant difference between the groups in self concept: and the School Sentiment Inventory was statistically significant. The need for further research in secondary bilingual education and the importance of longitudinal studies are discussed. (Author/AMH)

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ED189894

AN ANALYSIS OF THE EFFECTS OF A BILINGUAL CURRICULUM ON A SELECTED GROUP OF NINTH GRADERS WITH REGARDS TO ATTITUDE TOWARD SCHOOL AND SELF CONCEPT

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The purpose of this study was to determine the extent to which a bilingual curriculum affects self concept and attitude toward school of monolingual Spanish (MS) students as compared with monolingual English (ME) and Bilingual (BI) ninth graders exposed to a mainstream curriculum. The treatment group was the MS students and the two comparison groups were the ME students and the BI students.

This study addressed itself to the following research question: Will there be a significant difference between BI and ME students exposed to a mainstream curriculum and MS students exposed to a bilingual curriculum with respect to self concept and attitude toward school? This research has studied the effects of a bilingual curriculum in the enhancement of self concept and attitude toward school.

However, an important limitation of this study has to do with the fact that it is not an experiment. This study concerns itself with an analysis of the reactions of a group of students to a school program, i.e., bilingual education.

The research which now exists on self concept is not solidified. There are many studies which are unreplicated and various tests which measure self concept but very little theory. McDavid and Garwood (1978) define self concept as a cognitive belief system, which involves a set of attitudes all integrated into an organized and consistent behavior within the individual. The development of self concept is based on language, social feedback, and personal success and failure experiences. The self concept reflects what the individual thinks about himself as an object.

Levesly and Bromley (1973) show evidence that before the age of eleven children are incapable of processing discrepant information about another person. For example, a person can be viewed as either good or bad but not sometimes good or sometimes bad. Werner (1961) reports that with increasing age children's views of others become more ordered and differentiated, and concrete thought structures give way to abstract thought structures composed of diverse lower structures.

Cowan (1978) has proposed a similar process for our developing understanding of environmental events, and has described some of the changes that distinguish formal from concrete thought process. These changes include: (1) discovering the world of the hypothetical; (2) creating experiments to examine relationships between hypothesis and data; (3) developing more sophisticated patterns of deductive thought; and (4) relying on more formal schemes such as proportion, probability, and equilibrated systems, (Garwood and Greenberg, 1978). All of these changes enable the adolescents to develop a four dimensional outlook on the world.

FL011737

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Another characteristic of early adolescence is introspection or self searching behavior. This ability to critically examine one's self including one's thoughts as well as one's behaviors, depends in part on the emerging ability to coordinate the four dimensions discussed above. The ability to make finer distinctions in one's self-view results in the adolescent's introspective behavior.

It is apparent that adolescents begin to be better able to form unified impressions out of conflicting data about others and themselves. Humphrey (1975) reports that this change corresponds in time with the emergence of formal operations, and the developing ability to use more abstract thought processes seems related to this change of self-perception. Humphrey's findings suggest that self concept development follows a pattern similar to conservation development. Self concept prior to developing the ability to conserve is not self-evaluative.

The research on self concept discussed above is specially relevant for the Puerto Rican child who enters high school. In a very short period of time the student must assess his surroundings, analyze the surroundings, and adapt to them. While this process is taking place the adolescent must acquire a new language and assume new customs to fit his new personality. If during these processes the student meets resistance, his/her capacity to grasp the new language will be affected. On the other hand, if the adolescent is able to see himself as being accepted, loved and respected, while this metamorphosis is taking place, he will develop a positive self concept.

The process of learning a second language is affected by many motivational variables; one's attitude toward the language to be learned is one of them. Gardner and Lambert (1959, p. 266-7) report that adults who are dissatisfied with their positions in their own cultural group tend to learn as rapidly as possible those aspects of the other language which will allow them to become members of a new group. It seems that the more favorable a learner's attitude toward his native language is, the more effective is his effort to learn a second language. Tang (1974) found a significant interaction between the method of teaching second language reading and the attitudes of learners toward their own language as well as the language to be learned.

The function of attitudes toward school is relevant in that it explains why some students are more successful in grasping a second language than others. It further explains the reason why some non-English speaking students do not integrate into the mainstream community as quickly as others.

Lambert (1967) suggests that once a student formulates a positive attitude toward second language learning, then his self-esteem will increase and he will tend to success.

METHOD

SAMPLE

The sample used in this study was 138 ninth grade students of a high school in Connecticut. The selection of mainstream students took place from within the group of monolingual English (ME) and bilingual (BI) students taking English I as a subject matter. A total of 67 (ME) students were chosen for this study because in addition to English they were taking a mainstream curriculum. This curriculum comprised a core of the following courses: English, Mathematics, Science, and Regional Studies. The bilingual (BI) students were selected from within those Spanish surnamed ninth graders who were taking a mainstream curriculum similar to the ME students and in addition were taking Native Spanish. These bilingual students have been on the mainland for more than three years; 33 BI students were selected from those students recently arrived from Puerto Rico who have completed all course requirements to be promoted to the ninth grade. All the MS students (39) were taking a core curriculum in Spanish comprised of Mathematics, Science and Regional Studies. In addition they were taking Spanish, and two English courses (ESL and Reading).

PROCEDURES

The study used one treatment group (MS) and two comparison groups (ME and BI). The treatment was the bilingual curriculum. The pretest took place in the last week of September. The students were administered the Self-Esteem Inventory (SEI), the Self Appraisal Inventory (SAI) and the School Sentiment Inventory (SSI). The testing time for each student was approximately two hours.

At the conclusion of the pretesting sessions the MS students were assigned to the bilingual program. All MS students took two English classes (language and reading), Spanish, Regional Studies, Mathematics and Science. The language of instruction in the content area courses was Spanish while the textbooks were in English; concepts therefore were taught in two languages. The other two groups (ME and BI) continued to receive instruction in the mainstream curriculum. The BI students were taking native Spanish.

At the conclusion of the treatment, the three groups were administered a different form of the same instrument used in the pretest. The time lapse between the pre and post test was one semester (17 weeks).

INSTRUMENTATION

The instruments that were used to collect data were the following: The School Sentiment Inventory (SSI) (Frith and Nakimura, 1972) measured attitude toward school. This instrument is a self report inventory that can be group administered. It contains subscales for five factors (teacher, learning, social structures and climate, peer, general). The total raw scores were used for the purpose of this comparison. Test-retest reliability for each subscale for students in grades 7-12 are as follows: teacher instruction (r=.70); for learning (r=.63); and for general (r=.90). This instrument measured attitude toward school.

The Self Appraisal Inventory (SAI) (Frith and Nakimura, 1972) was used to measure self concept. This instrument is a self report inventory that can be group administered. It contains subscales for four factors (peer, family, school, and general). For the purpose of this study one subscale was administered (school to explore the scholastic dimension of self concept). Test retest reliability for this subscale with students in grades 7-12 was (r=.58).

The third measure of affective behavior was the Self Esteem Inventory (SEI) (Coopersmith, 1967). This instrument is a self report measure that can be group administered. It contains subscales for four factors (general self, social self, home-parents, and school-academic), and a total score. For the purpose of this study total raw scores were compared. This measure was included as an indicator of change in self-esteem as a result of the exposure to the curriculum (bilingual vs. mainstream). Test-retest reliability (five weeks) for 30 tenth grade students was (r=.88). There were significiant coorelations between the SEI scores (r=.29) and achievement scores (r=.30), and sociometric choice (r=.-37). The multiple correlation between sociometric choice and achievement combined (r=.49) advanced the prediction of self-esteem (Coopersmith, 1967).

The three instruments used to measure the affective behavior of the students in the MS group were translated into Spanish by the author. The revised edition of the affective measures (SSI, SAI, SEI) included suggested changes in language where the items were not clear.

STATISTICAL ANALYSIS

This study was performed with pre-existing groups. Since these groups may differ initially on potentially confounding variables such as intelligence and socio-economic status, pre-testing on both experimental and comparison groups was performed. The pretest results showed that the groups do differ in ways that might bias later evaluation results. An analysis of covariance (ANCOVA) procedure was used to analyze the evaluation results to control for the initial differences in the pre-test by using them as a covariate. The pretest data were collected before the treatment was administered.

RESULTS, RECOMMENDATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The students in all three groups were administered two measures of self concept for the purpose of this study. The Self Esteem Inventory measures perceived self with regard to home-parent, school-academic, social self and general self. The second instrument, the Self Appraisal Inventory, measures the perceived self with regard to peer, family, and school. For the purpose of the statistical analysis, total scores were used in both of these measures.

TABLE 1

Pre-Post and Adjusted Means and Analysis of Variance Table for Self Esteem Inventory Adjusted for Covariates

	Biling	Mono Sp	Mono Eng
Pretest X	26.000	29.026	24.152
Post-test X	25.091	31.615	24.000
Adjusted Post-test X	25.271	30.406	25.029

Source	df	SS	MS	F	Significance
Group	2	699.240	349.620	21.447	.001***
Within	134	2184.433	16.302		
Total	136	2883.673			

*** Significance level <.001

Table 1 presents the pre, post, and adjusted post-test means for the dependent measure Self Esteem. The MS group shows a higher mean in the pretest (29.026) while the ME group shows the smaller mean (24.152). Post-test mean scores show that the three groups had increased. The adjusted mean scores show that the MS group had a greater adjusted mean (30.406) than the other two groups. An ANCOVA indicated that a significant difference exists between the three groups ($F=21.447$; $p < .001$).

Table 2 measures the pre, post, and adjusted means for the dependent variable Self Appraisal Inventory.

TABLE 2

Pre-Post and Adjusted Means and Analysis of Variance Table for the Self Appraisal Inventory Adjusted for Covariates

	Biling	Mono Sp	Mono Eng
Pretest X	9.212	9.513	9.545
Post-Test X	10.000	11.231	9.848
Adjusted Post-test X	10.093	11.191	9.795

Source	df	SS	MS	F	Significance
Group	2	45.654	22.827	3.367	.038**
Within	134	908.442	6.779		
Total	136	954.096			

** Significance level < .05

The post-test mean scores show that the three groups have grown. The ajdusted post-test means show that the MS group has a higher mean score (11.191) while the ME has the lowest (9.795). An ANCOVA showed that a significant difference ($F= 3.367$; $p < .05$) between groups.

A closer analysis of the mean differences shows that the MS group recorded higher scores than the ME and the BI groups. This might be a reflection of the degree of interrelationship in Puerto Rican families as well as the rapport between the teachers and students in the bilingual program.

In order to measure the attitude toward school the School Sentiment Inventory was administered to the three groups. This inventory is a measure of the reported perception of students with regard to teacher instruction and learning. The total scores of this instrument were used for the purpose of the analysis.

Table 3 presents the pre, post, and adjusted post-test means for the dependent measure SSI.

TABLE 3

Pre-Post and Adjusted Means and Analysis of Variance Table for the School Sentiment Inventory Adjusted for Covariates

	Biling	Mono Sp	Mono Eng
Pretest X	13.121	11.462	12.667
Post-Test X	14.364	16.103	12.773
Adjusted Post-test X	14.190	16.338	12.771

Source	df	SS	MS	F	Significance
Group	2	275.109	137.555	3.255	.42*
Within	134	5663.566	42.265		
Total	136	5938.675			

* Significance level $< .05$

The pretest means show that the mean of the BI group is greater (13.121) than that of the other two groups. The mean of the MS group was the smallest (11.462). While the post means show that all group means increased, the MS groups shows the greater growth (16.338) while the slower growth was recorded by the ME group (12.773). The ANCOVA showed that there was a significant difference between the groups ($F=3.225$; $p < .05$).

The literature on self concept and second language learning (Garwood and Greenberg, 1978) suggests that the student's perception of self with regard to school, home, and peers is vital in order to achieve mastery of the second language.

This study seems to support the notion that a student who has a positive image of self will tend to perform better in school. Further study is necessary to explore differences between the ME and the MS students.

The School Sentiment Inventory measured the attitude toward teacher instruction and learning. This dependent measure yielded a significant difference between the MS and the ME groups with respect to adjusted post test scores. A closer

look at the pre-post test means indicate that the growth of the MS group was greater than the ME and BI groups. The literature (Mueller and Miller, 1970) suggests that if the students' attitudes toward the teacher, the language to be learned, and the environment of which they are part are positive, then achievement may increase.

The methods for assessment of self concept, and attitude toward school should be assessed with other populations as well as in different geographic areas. One of the limitations of the current study is that secondary bilingual education does not mean the same thing for different school systems.

The fact that ME as well as BI students were included in this study provides some basis for comparison with other populations. Populations which present different characteristics such as different program foci, city populations, school size, and academic achievement might produce different relationships with the dependent measures: self concept and attitude toward school.

As the study was confined to one semester, the time period may have been too restrictive for assessing change. Situational demands may have played an important role in the students' responses to testing. Studies which measure student growth over a longer period of time should be considered. Longitudinal studies would also be necessary to determine the permanence of the first language, the enhancement of the second language, and perhaps the influence, if any, of situational demands. The effects of culture on school attitudes might also warrant further study.

In the current study, although some differences showed between the growth of the three groups in terms of self concept, and attitude toward school, no clear normative data are presented which would aid in the process of training teachers or implementing programs. It seems that, given the general pattern and time frame of most academic research, the Board of Education must themselves assume primary responsibility for formative research.

The current research has investigated self concept, and attitude toward school in MS students taking a bilingual curriculum as compared with ME and BI students in the mainstream. While certain differences were found which yielded statistical significance, this study did not provide an answer for the specific factors influencing the variables (self concept and attitude toward school) under study.

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